

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 62200

Page 2

Wednesday, September 22, 2010 10:23:08 A

Item ID: D4148-041

Accept



Setup Start



Revision ID:

Item Name: Crosstube Lug Assembly, Fwd

Stop



Start Date: 9/22/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/29/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

RD 1356
 NOV
 RSP 101
 RSP 101
 MP
 10-11-4

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 22, 2010 10:23:17 AM

Page 1

Work Order ID: 62200



Parent Item: D4148-041



Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 9/22/2010

Required Date: 9/29/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC
IPP Rev:B 10.07.22 as per revB DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4148-5 		Manufactured	No			100	Each	6.0000	1	1			

Eyebolt Stud

Location	Loc Qty	Loc Code
GA	6	
61005	6	

MS20615-4M18

Purchased

No

Rivet

Location	Loc Qty	Loc Code
ST323	451	
114808	152	
115037	299	

D2690-6

Manufactured

No

Lanyard Assembly

Location	Loc Qty	Loc Code
ST020	31	
59960	6	
61382	25	

D4148-1

Manufactured

No

Crosstube Lug Plate, Fwd

Location	Loc Qty	Loc Code
GA	2	
61006	2	

SB 10/09/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 22, 2010 10:23:17 AM

Page 2

Work Order ID: 62200



Parent Item: D4148-041



Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 9/22/2010

Required Date: 9/29/2010

Start Qty: 1.00

Required Qty: 1.00

D4148-3



Stud Receiver, Lower

Manufactured No

100 Each 6.0000



1
1

Sn 10/09/23

B 62202

Location

Loc Qty

Loc Code

GA

6

61007

D3910-1



Crosstube Lug

Manufactured No

100 Each 9.0000



1
1

Sn 10/09/23

Location

Loc Qty

Loc Code

st507

9

59349

8

59708

1

D4091-1



Mounting Lug

Manufactured No

100 Each 5.0000



1
1

Sn 10/09/23

Location

Loc Qty

Loc Code

ST460

5

61008

5

AN3C12A



Bolts

Purchased No

100 Each 72.0000



4

Sn 10/09/23

Location

Loc Qty

Loc Code

ST351

72

112314

8

114761

11

115392

33

115594

20

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 22, 2010 10:23:17 AM

Page 3

Work Order ID: 62200



Parent Item: D4148-041



Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 9/22/2010

Required Date: 9/29/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C13A



Purchased

No

100

Each

91.0000

1

1

SN 10102123

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST357	91	
113359	3	
114442	38	
114615	50	

MS17984-C413



Purchased

No

100

Each

18.0000

1

1

SB 10102123

PIN, QUICK RELEASE

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST297	4	
114340	4	
ST314	14	
114523	1	
114886	13	

MS21043-3



Purchased

No

100

Each

2,615.000

4

4

SB 10102123

Nut

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	76	
103691	76	
ST301	2539	
109147	4	
111383	46	
112314	2489	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 22, 2010 10:23:17 AM

Page 4

Work Order ID: 62200



Parent Item: D4148-041



Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 9/22/2010

Required Date: 9/29/2010

Start Qty: 1.00

Required Qty: 1.00

MS21043-4



Purchased

No

100

Each

817.0000

1

1

Nut

Sh 10/29/23

Location	Loc Qty	Loc Code
FG	40	
104603	40	
ST301	777	
112492	25	
113069	8	
114523	444	
114784	300	

NAS1149C0332R



Purchased

No

100

Each

1,187.000

8

8

Washer

Sh 10/29/23

Location	Loc Qty	Loc Code
ST297	1187	
113524	10	
113737	150	
115000	141	
115698	886	

NAS1149C0432R



Purchased

No

100

Each

682.0000

2

Washer

Sh 10/29/23

Location	Loc Qty	Loc Code
ST297	682	
114292	92	
114742	590	

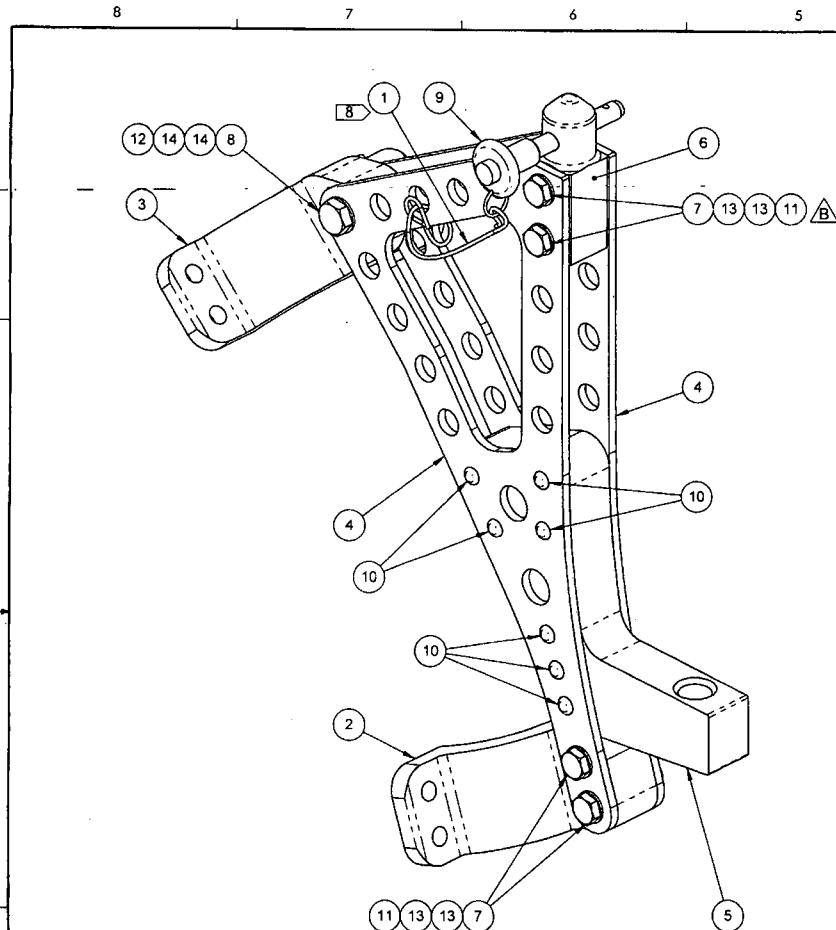
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-041 FWD X-TUBE LUG ASSY

A NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 3.47 lbs
- 8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *62200*

07/09/22

ITEM	QTY	P/N	DESCRIPTION
X	1	D4148-041	FWD X-TUBE LUG ASSY
1	1	D2690-6	LANYARD
2	1	D3910-1	X-TUBE LUG
3	1	D4091-1	Mounting LUG
4	2	D4148-1	FWD X-TUBE LUG PLATE
5	1	D4148-3	STUD RECEIVER LOWER
6	1	D4148-5	EYEBOLT STUD
7	4	AN3C12A	
8	1	AN4C13A	BOLT
9	1	MS17984-C413	PIP PIN
10	7	MS20615-4M18	RIVET
11	4	MS21043-3	NUT
12	1	MS21043-4	NUT
13	8	NAS1149C0332R	WASHER
14	2	NAS1149C0432R	WASHER

B	REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R MS20615-4M20 (ZN A7-3); B7-2 (ZN B7-2); MS20615-4M18 WAS MS20615-4M20 (ZN A7-3); B7-2 (ZN B7-2) PL REPLACES Ø0.129 3 PL (ZN D6-3); Ø0.129 7 PL WAS 10 PL (ZN A7-3); Ø0.191 WAS Ø0.129 (ZN C8-5). REASON: SEE TR-D350-607-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>10</i>	DART AEROSPACE LTD	
DRAWN	<i>10</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>10</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>10</i>	D4148	SHEET 1 OF 5
APPROVED	<i>10</i>	TITLE	SCALE
DE APPR.	<i>10</i>	FWD X-TUBE LUG ASSY	NTS
DATE	10.07.05	COPRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

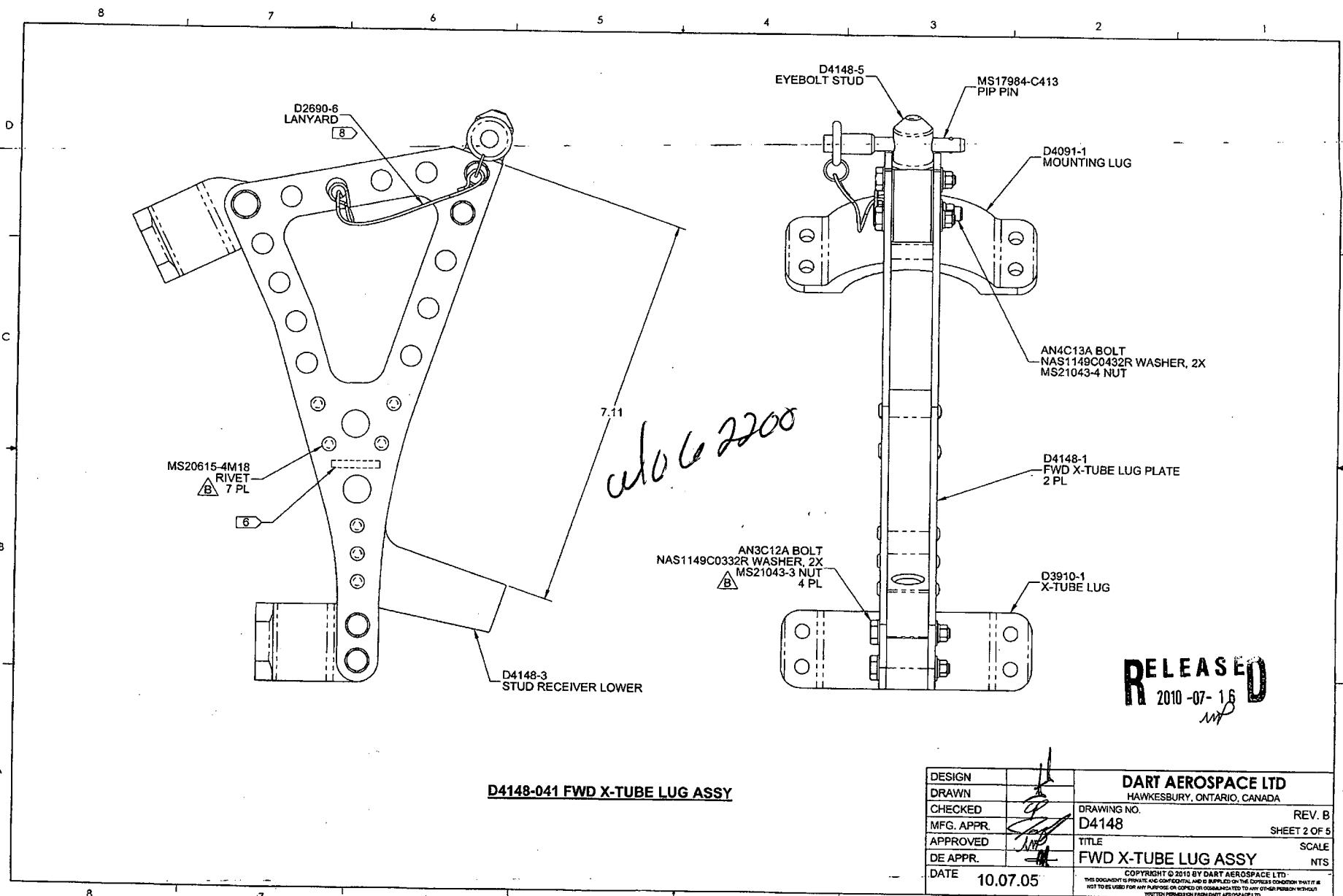
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



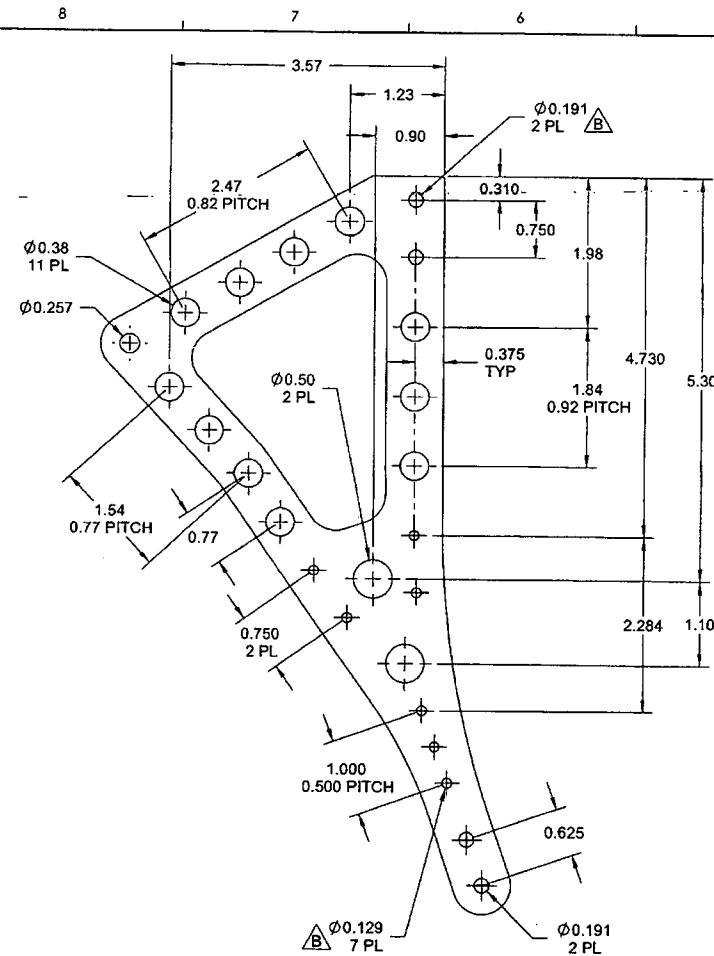
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

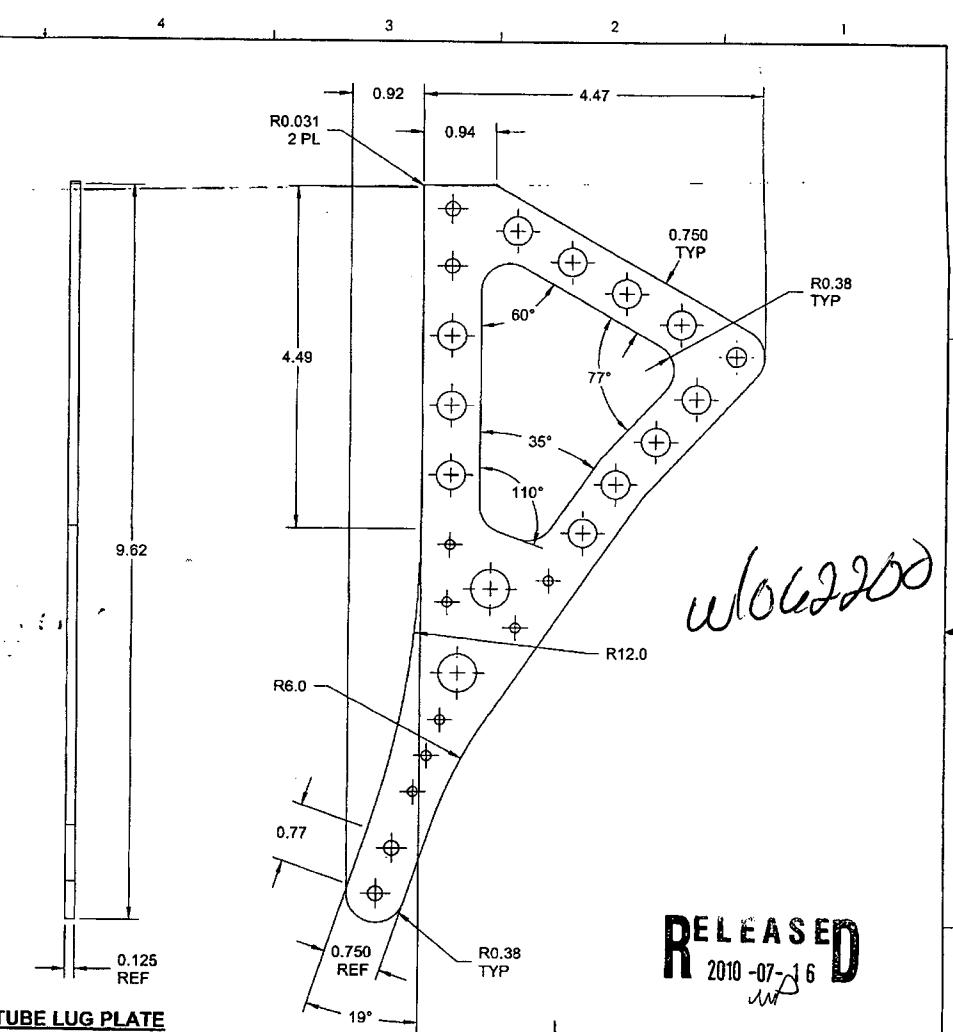
NOTE: Date & initial all entries



D4148-1 FWD X-TUBE LUG PLATE

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL 0.125" SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC MS304S11GA OR MS303S11GA
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.48 lbs



RELEASED
2010-07-16
W

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	DRAWING NO.
MFG. APPR.	<i>[Signature]</i>	REV. B
APPROVED	<i>[Signature]</i>	D4148
DE APPR.	<i>[Signature]</i>	TITLE
DATE	10.07.05	SCALE
		NTS

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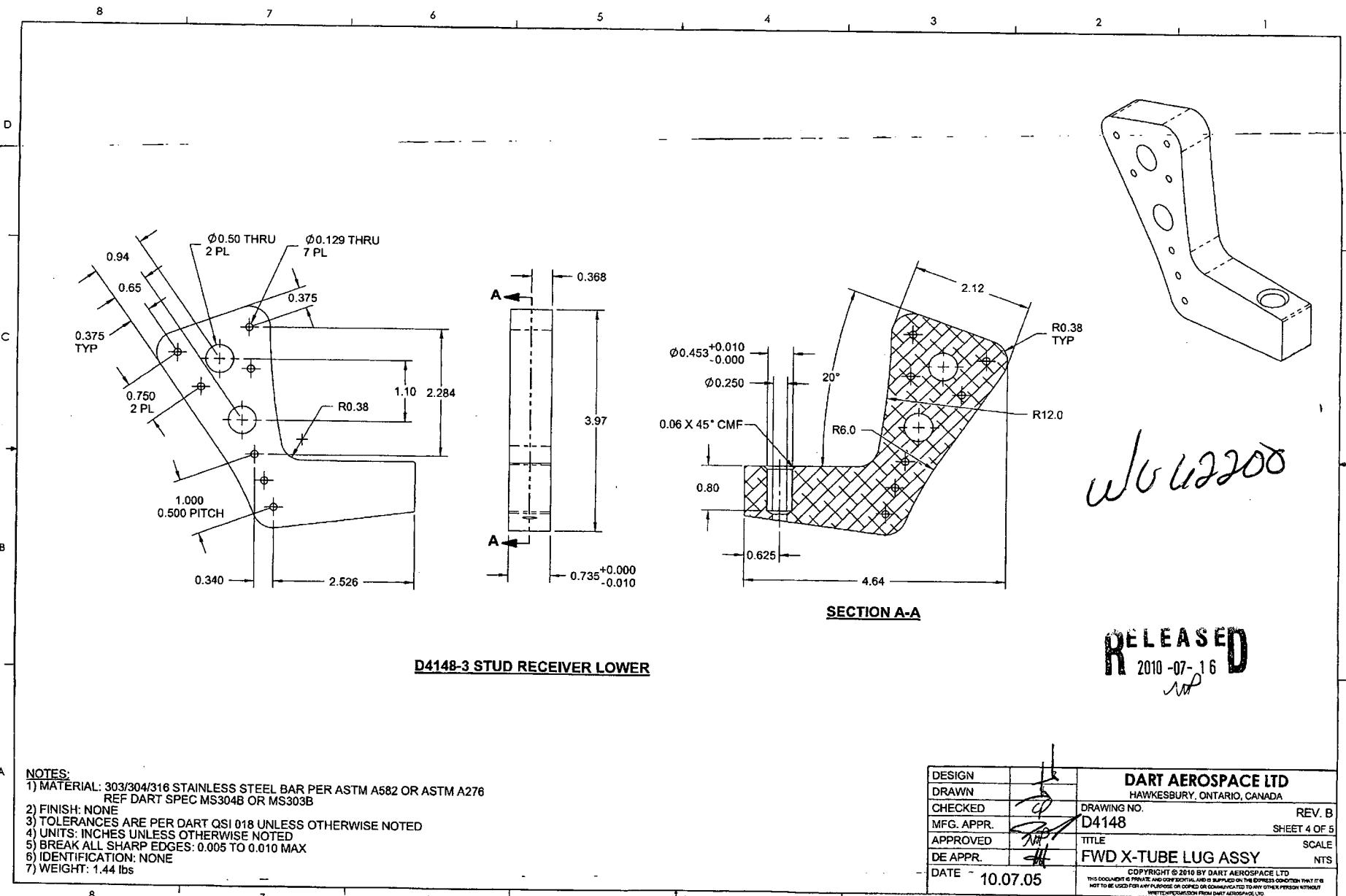
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-3 STUD RECEIVER LOWER

RELEASED
R 2010-07-16
W

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	DRAWING NO. D4148
MFG. APPR.	<i>[Signature]</i>	REV. B
APPROVED	<i>[Signature]</i>	SHEET 4 OF 5
DE APPR.	<i>[Signature]</i>	TITLE FWD X-TUBE LUG ASSY
DATE	10.07.05	SCALE NTS

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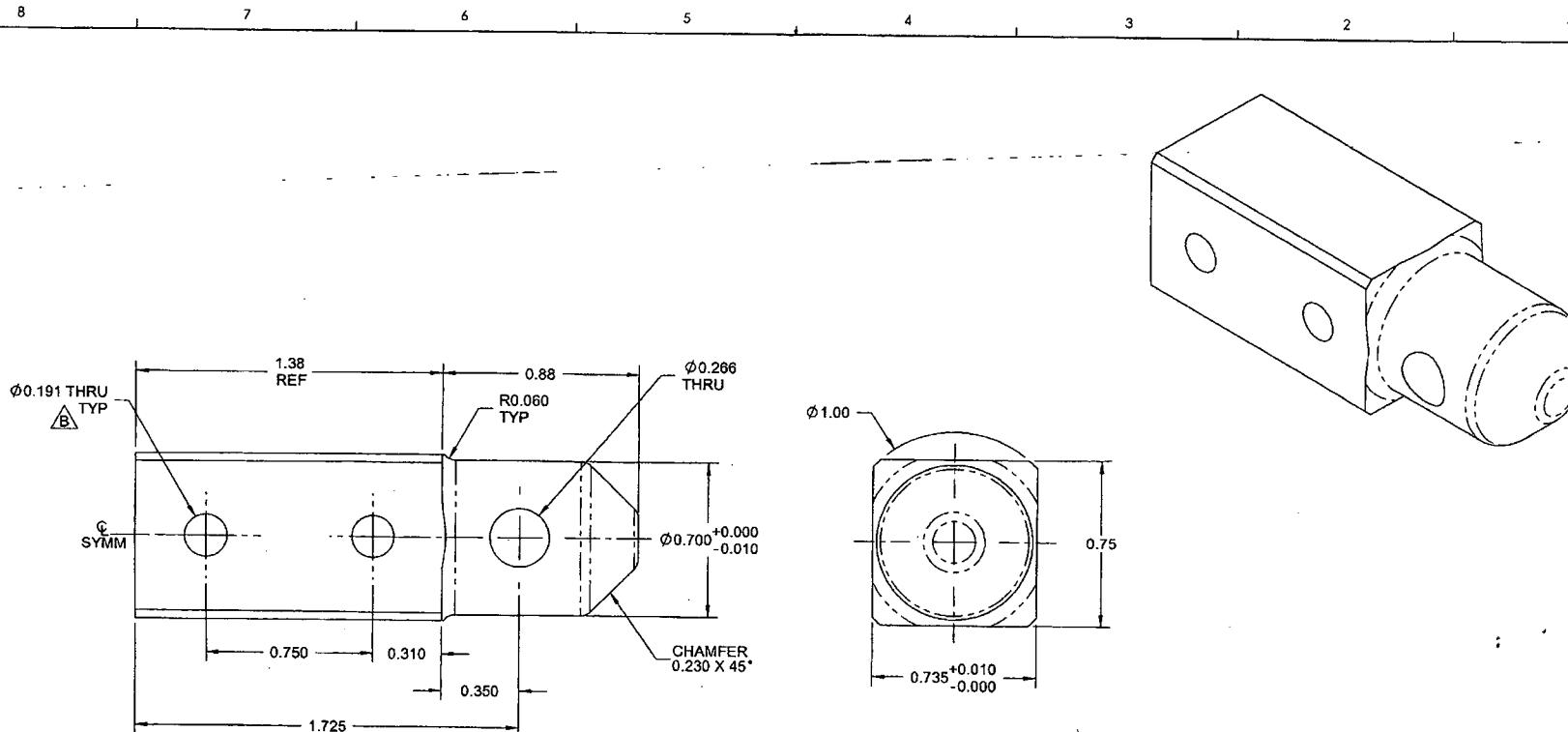
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-5 EYEBOLT STUD

wlo (2200)

RELEASED
2010-07-16
MP

A NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.28 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		REV. B
MFG. APPR.		D4148
APPROVED		SHEET 5 OF 5
DE APPR.		TITLE
DATE	10.07.05	SCALE
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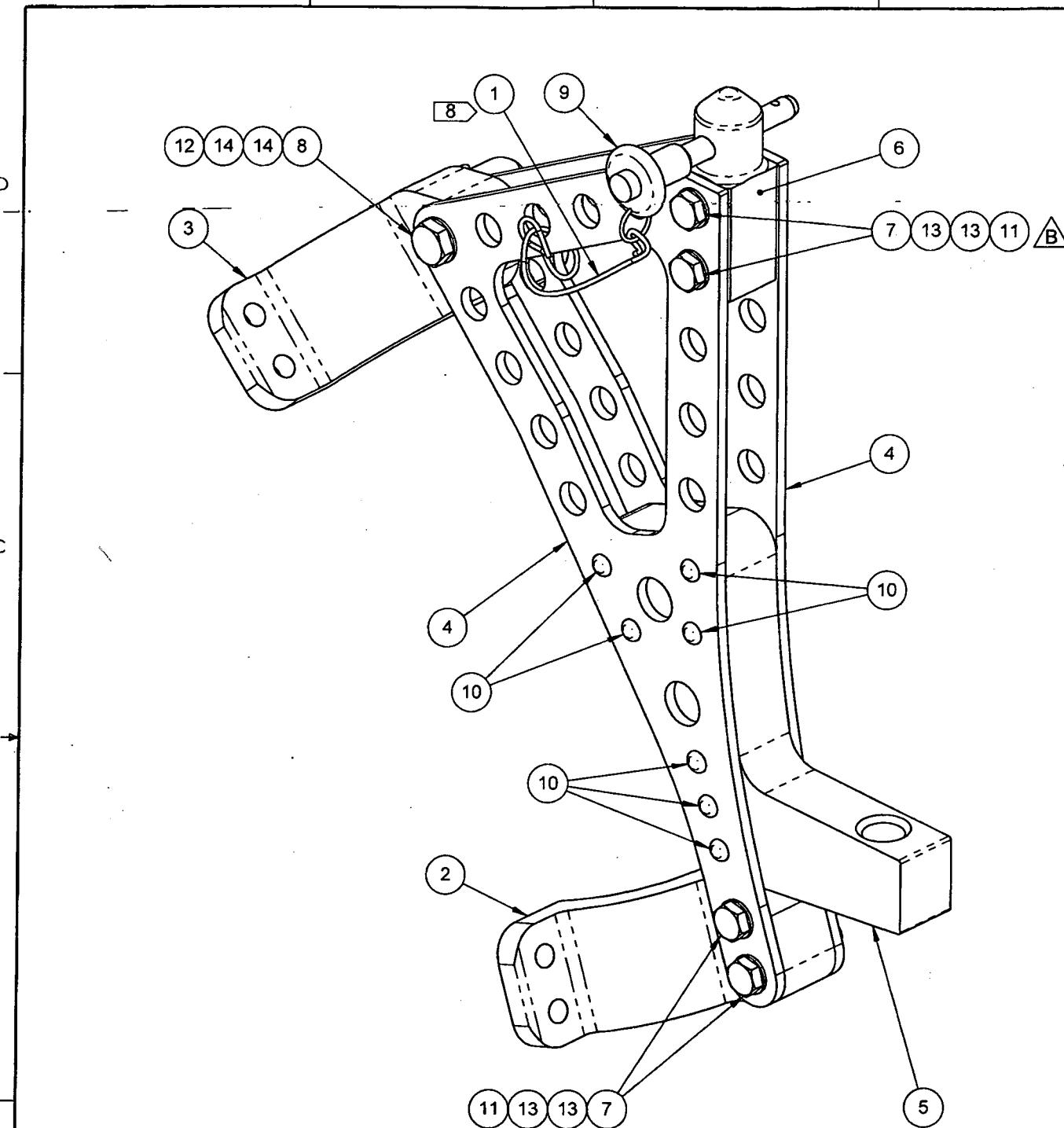
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-041 FWD X-TUBE LUG ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 3.47 lbs
- 8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

ITEM	QTY -041	P/N	DESCRIPTION
X	D4148-041	FWD X-TUBE LUG ASSY	
1	1	D2690-6	LANYARD
2	1	D3910-1	X-TUBE LUG
3	1	D4091-1	MOUNTING LUG
4	2	D4148-1	FWD X-TUBE LUG PLATE
5	1	D4148-3	STUD RECEIVER LOWER
6	1	D4148-5	EYEBOLT STUD
7	4	AN3C12A	
8	1	AN4C13A	BOLT
9	1	MS17984-C413	PIP PIN
10	3	MS20615-4M18	RIVET
11	4	MS21043-3	NUT
12	1	MS21043-4	NUT
13	8	NAS1149C0332R	WASHER
14	2	NAS1149C0432R	WASHER

* SHAPE IS DIFFERENT
ASSY 1) SIMILAR.
SEE SCREENSHOT ATTACHED.

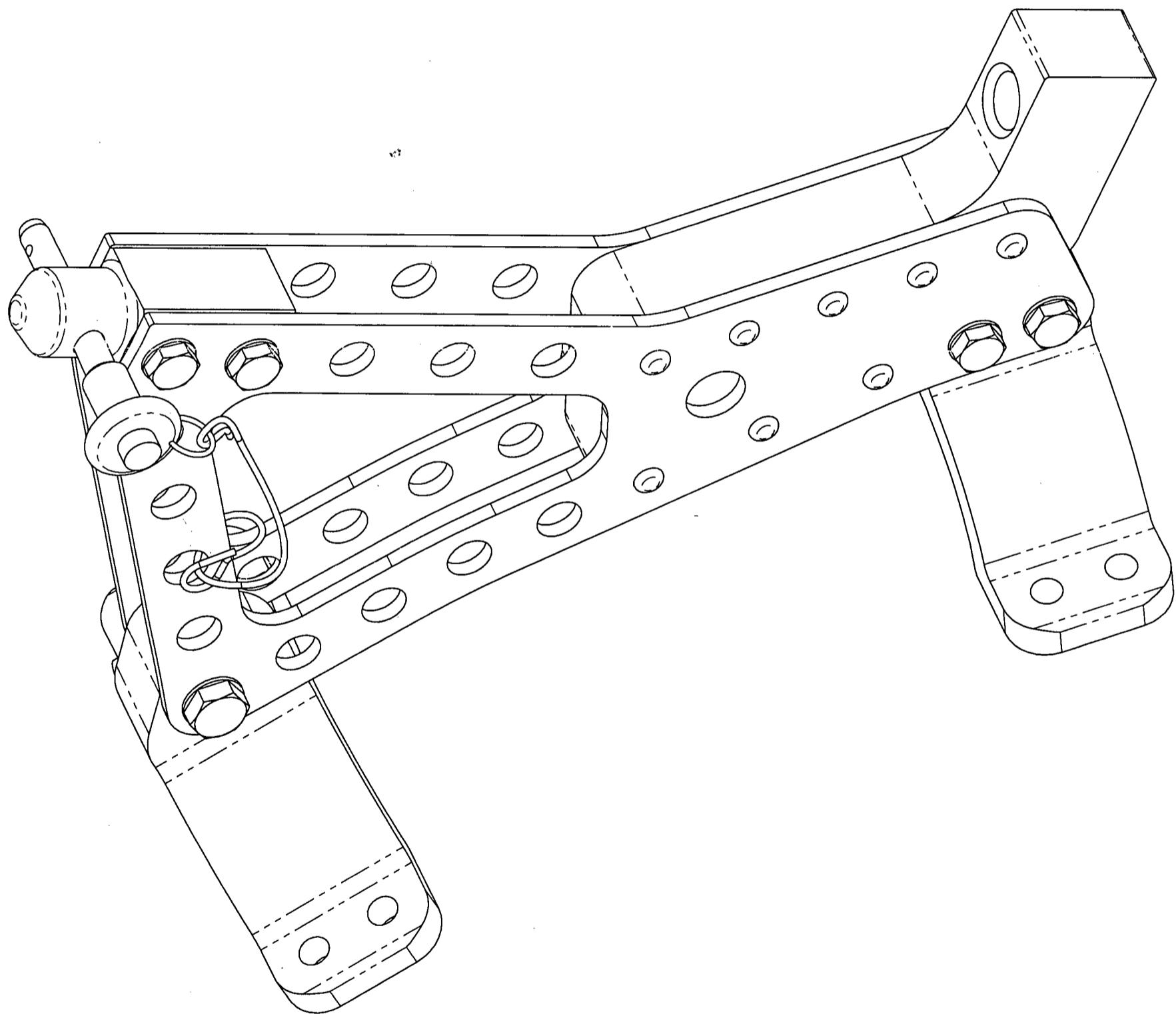
~~REFERENCE ONLY~~

FOR MANUFACTURE
OR ONE PROTOTYPE
INCLUDE
MATERIALS
TO W/O

~~RELEASED~~
10.07.21 2010-07-16
WMD

B	REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1, B7-2 & B4-2); MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN D6-3); Ø0.129 7 PL WAS 10 PL (ZN A7-3); Ø0.191 WAS 0.129 (ZN C8-5). REASON: SEE TR-D350-607-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION		
DESIGN	DART AEROSPACE LTD		
DRAWN	HAWKESBURY, ONTARIO, CANADA		
CHECKED	REV. B		
MFG. APPR.	D4148		
APPROVED	SHEET 1 OF 5		
DE APPR.	TITLE		
DATE	FWD X-TUBE LUG ASSY		
	SCALE		
	NTS		
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REFERENCE ONLY
FOR MANUFACTURE
OR ONE PROTOTYPE.
INCLUDE MATEL CERT
TO W/O.



D4148-041 FWD X-TUBE LUG ASSY

